

CLAIMS

What is claimed is:

1. A database search system, comprising:
a database for storing a document file;
a database control unit for controlling a transfer of a document file to and from said database;
a search engine for searching said database on the basis of a keyword comprised of a character string ,
and for returning a search result to said database control unit; and
a data file for use in a search process by means of said search engine, for retaining information indicating a correspondence of said keyword to positional information of the keyword, based on a field in the document file that includes said keyword.
2. The database search system according to Claim 1,
wherein the database control unit reads the document file from the database, and extracts a text of the document file and information indicating a structure of the document file, to send the text and the information to the search engine; and
the search engine creates the data file based on the text and the information indicating the structure of the document file received from the database control unit.

3. The database search system according to Claim 1, wherein the data file retains, as the positional information on the keyword, information that identifies the document file containing the keyword and information that specifies a position of the keyword in the document file, each item of the positional information being associated with a corresponding item of the keyword listed as a separate item for a respective field.
4. The database search system according to Claim 1, wherein the data file comprises:
 - a first table that lists character strings contained in the document file stored in the database and pointers to positional information on the character strings, each character string being listed as a separate item for respective fields where the character string appears in the document file; and
 - a second table that lists positional information on each character string including the character strings listed in the first table, said positional information including information that identifies the document file containing the character string and information that specifies a position of the character strings in the document file.

5. A database search method of searching a database for a desired document, comprising:
inputting a search expression including a search term that contains a given character string and field information specifying a field in a document file where the search term appears;
referencing a data file stored in memory and retaining information indicating a correspondence of information that specifies said document file to the keyword according to a field in said document file;
specifying said keyword corresponding to said search expression that comprises said field information;
acquiring information specifying the document file including said keyword; and
outputting the information acquired by referencing said data file as a search result.
6. The database search method according to Claim 5, wherein referencing the data file comprises acquiring the information specifying the document file, by distinguishing a field containing the keyword in the document file based on the field information included in the search expression.

7. A method of creating a data file for use in searching a database, comprising:
reading the document file from said database and
extracting a text in the document file and information
indicating a structure of the document file;
dividing said text into keywords of partial character
strings of the text; and
creating a data file for retaining information that
indicates a correspondence of the keyword to positional
information of the keyword, based on a field in the
document file that includes said keyword.
8. The method according to claim 7, wherein reading the
document file comprises extracting information that
indicates a position of a tag written in the document
file.
9. The method of claim 7, wherein creating the data file
comprises registering the positional information on
each keyword with the data file, said positional
information including information that specifies a
document file that contains the keyword and information
that specifies a position of the keyword in the
document file, and each item of the positional
information being associated with a corresponding item
of the keyword listed as separate items for respective
fields.

10. A recording medium having a computer-readable record of index information for use in searching a database, comprising:
 - a first table listing character strings included in document files and stored in said database, and further listing pointers to positional information of the character strings; and
 - a second table listing positional information including information specifying a document file where a certain character string exists, and information specifying a position of the character string in the document file regarding the character string that includes character strings entered in said first table;
 - wherein said first table lists identical character strings independently by fields where the character strings in the document file appear; and
 - wherein said second table lists information specifying a document where the character strings appear in the field, and that further lists information specifying a position of the character string in the document file, which corresponds to said character strings by fields entered in said first table.
11. The recording medium according to claim 10, wherein the first table lists the character strings sorted in a predetermined character-code order.

12. The recording medium according to Claim 10, wherein the first table further lists a single character string that integrates identical character strings regardless of fields in the document file; and wherein the second table further lists positional information on the listed single character string that integrates the identical character strings.
13. A computer program product for use in searching a database, comprising:
database control means for controlling the transfer of a document file to and from a database; and
search means for referencing the data file retaining information that specifies a document file which includes a keyword containing a character string and information indicating a correspondence to the keyword according to a field in the document file, the document file including the keyword and transmitting information specifying the document file where the character string appears in the field to the database control means.
14. A computer program product for use in searching a database, comprising:
a first set of instruction codes for receiving an input of a search expression that contains a search term made of a given character string and field information specifying a field in a document file where the search term appears;

a second set of instruction codes for referencing a data file stored in memory and retaining information indicating a correspondence of information that specifies said document file to the keyword according to a field in said document file;
a third set of instruction codes for specifying a keyword corresponding to said search expression that comprises said field information;
a fourth set of instruction codes for acquiring information specifying a document file including the specified keyword; and
a fifth set of instruction codes for outputting the information acquired by referencing said data file as a search result.

15. A computer program product creating a data file for use in searching a database, comprising:
a first set of instruction codes for reading a document file from said database and for extracting a text in the document file and information indicating a structure of the document file;
a second set of instruction codes for dividing said text into keywords of partial character strings of the text; and
a third set of instruction codes for creating a data file for retaining information that indicates a correspondence of the keyword to positional information of the keyword, based on a field in the document file that includes said keyword.